



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

July 8, 2008

Mr. Mark Capallo, President
Energy & Process Corporation
2146-B Flintstone Drive
Tucker, GA 30084-5000

**SUBJECT: ENERGY AND PROCESS RESPONSE TO REACTIVE VENDOR INSPECTION
– NRC TEAM INSPECTION REPORT 99900866/2008-001 AND NOTICE OF
NONCONFORMANCE**

Dear Mr. Capallo:

This letter is in reference to Nuclear Regulatory Commission (NRC) Inspection Report 99900866/2008-001, dated May 20, 2008, which documented five nonconformances. These nonconformances addressed problems with Energy and Process' (E&P) Quality Systems Program regarding inadequate surveillance of the fabrication of rebar, inadequate audits of sub-suppliers, failure to verify adequacy of design in the dedication of commercial grade items, failure to write a condition report for a significant condition adverse to quality, and failure to properly disposition a code deficiency. On June 9, 2008, NRC received your response to the subject inspection report. You did not dispute any of the nonconformances, however, a number of statements in the response suggested that some of the information contained in the report or the nonconformances was inaccurate or not fully understood.

We have completed our review of your response and are advising you of our decision. Details of our review are provided in the enclosure to this letter.

Based on our review, we have determined that your response does not adequately address the five specific nonconformances. Additional corrective actions and a resubmittal of your response will be required before the nonconformances can be closed.

We also noted some general issues with your response. In your response, you make reference to undocumented conversations with the Mixed Oxide Fuel Fabrication Facility (MOX FFF) personnel that were used to reach agreement regarding the supply of specific parts as a course of business in finalizing the purchase specification for these parts. Undocumented conversations are not credited by the NRC as a basis for determining compliance with regulatory requirements. Also, your response appears to imply that a material organization's quality responsibility is limited to ensuring material traceability. In contrast to this implication, your American Society of Mechanical Engineers' NCA-3800 Quality Systems Certificate requires that you establish a quality program for the control of quality during manufacture or during work you propose to perform, in addition to ensuring traceability of material or source material under your control. Our inspection identified that you failed to provide quality oversight for the fabrication of rebar, a manufacturing activity, which was the basis for our first nonconformance.

Your response also assumes that an agreement by a customer to perform receipt inspection relieves the vendor's responsibility to inspect the fabrication process. A receipt inspection cannot, under most circumstances, be used to validate the fabrication process, because key elements of the fabrication process do not lend themselves to post-fabrication inspections. For example, small changes in process variables, substitutions of elements, and changes in manufacturing tolerances often cannot be identified during typical receipt inspection, which is usually oriented to verification of dimensional attributes and a review of material traceability documentation.

In addition, there appears to be a misunderstanding reflected in your response regarding what constitutes contractual requirements versus the informal processes for changing contract commitments. The quality of components, items and parts procured for installation into "safety-related" or "items relied on for safety" applications is predicated on adherence to the codes and standards listed in the formal purchase specification. Adherence to these codes and standards is mandatory, and can only be changed using formal documented processes that describe the basis for the change and have full written agreement by the customer. Any agreements not related to the codes and standards contained in the formal purchase specification would be considered commitments. These commitments could then be changed using the informal processes established as a course of normal business practice.

In accordance with 10 CFR 2.390 of NRC's "Rules of Practice," this document may be accessed through the NRC's public electronic reading room, Agency-Wide Document Access and Management System (ADAMS) in the Internet at [http: www.nrc.gov/reading-rm/adams.html](http://www.nrc.gov/reading-rm/adams.html).

Should you have any questions concerning this letter, please contact us.

Sincerely,

/RA/

Charles R. Ogle, Deputy Director
Division of Construction Inspection

Docket No. 99900866

Enclosure:
NRC Response to Energy and Process Letter
dated May 30, 2008

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PUBLICLY AVAILABLE
 NON-PUBLICLY AVAILABLE
 SENSITIVE
 NON-SENSITIVE
 ADAMS: Yes
 ACCESSION NUMBER: ML081900368
 SUNSI REVIEW COMPLETE

OFFICE	RII:DCP	RII:DCI	RII:DCI	HQ:NMSS	HQ:DCIP	HQ:DCIP	RII:EICS
SIGNATURE	BB	via email	via email				
NAME	BBurgess	JTapia	JCalle	PBell	KHeck	O Pasquale	CEvans
DATE	7/08/08	6/30/08	7/01/08	6/26/08	6/30/08	7/01/08	7/02/08
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

Letter to Mark Capallo from Charles Ogle dated July 8, 2008

SUBJECT: ENERGY AND PROCESS RESPONSE TO REACTIVE VENDOR INSPECTION –
NRC TEAM INSPECTION REPORT 99900866/2008-001 AND NOTICE OF
NONCONFORMANCE

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NRC Response to Energy and Process Letter dated May 30, 2008

Nonconformance 99900866/08-01-01

10 CFR 50, Appendix B, Criterion X, "Inspection," requires, in part, that "a program for inspection of activities affecting quality shall be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity."

Contrary to the above, from January 2007 through February 2008, Energy and Process performed surveillances (inspections) of fabricated reinforcing steel purchased from Commercial Metals Company (CMC) Rebar Carolinas that did not verify conformance to specified documents, including the American Concrete Institute (ACI) 349, "Code Requirements for Nuclear Safety-Related Concrete Structures." The failure of Energy and Process to perform adequate surveillances that verified conformance to quality during fabrication of reinforcing steel resulted in a large quantity of nonconforming reinforcing steel, approximately 892 tons, sent to the Mixed Oxide Fuel Fabrication Facility for installation into items relied on for safety structures.

Energy and Process Response to Nonconformance 99900866/08-01-01

The reason for the nonconformance is the lack of a joint E&P and Shaw/Areva (MFFF) affirmation of the mutual agreement reached and gathered through document submittal and approval by MFFF, joint audits, and meeting consensus. ACI 349 is given no precedence within the body of specification DCSO 1 -BKA-DS-SPE-B-09328-3.

Upon acceptance of the contracts from Shaw/Areva for the MFFF project, extensive teleconferences and meetings were held with the customer to reach a mutual agreement as to the method to be used for the dedication of the subject materials. Inherent to this process was the original audit and approval of the E&P quality program on July 10-11, 2006. E&P surveillance is defined in section 8.5 of E&P's quality manual which was submitted and approved by MFFF. The limitation of the surveillance activities were set by the necessity of controlling the traceability of the qualified CMC material to include proper marking, tagging, packaging, bundling and documenting. The inspection of the formed rebar was accepted as a responsibility by MFFF. MFFF did not notify of any noncompliant dimensional attribute and accepted, through their inspection process, shipments received from January 2007 through February 2008. Form 109 was submitted by E&P as the record of surveillance. Form 109 was reviewed and accepted by MFFF.

Shaw/Areva MFFF provided a significant presence at CMC Rebar Carolinas. E&P identified and performed inspection activities to the extent defined by our QCP 11 paragraph 11.4.4 (material specification). All activities related to the dedication of material were performed and found to be compliant. On January 4, 2007, a meeting was held at CMC with customer's representatives and E&P personnel to outline the plan for the manufacture, examination, test and shipment of the materials to be supplied. A formal written agenda and customer's audit checklist was followed. CMC was identified as a customer accepted provider. E&P form 109 had already been submitted to the customer and approved. The initial plan was to perform random surveillances at CMC until a reasonable level of assurance could be achieved. During this period the customer's representative was present to perform joint surveillances with the E&P inspector. E&P, through mutual agreement with Shaw/Areva MFFF, shipped formed rebar directly from

Enclosure

CMC Rebar Carolinas. For direct shipments, the inspection of the final produced parts is the responsibility of the customer (MFFF) as defined in section 4.2 of the E&P Quality Manual. The customer (MFFF) was aware of this responsibility by virtue of the proposal submittals including E&P's quality manual, submittals approval, MFFF audit of E&P, post award meeting held July 31, 2006, and post award meeting and audit at CMC held January 4, 2007. Based upon the mutual agreement to allow for direct shipments and a mutual agreement relative to the responsibilities and processes to be implemented by E&P, CMC Rebar Carolinas, and MFFF, production took place.

ACI 349 was a referenced specification noted in the body of DCS01-BKA-DS-SPE-B-09328-3 Section 1.4 "References, Codes and Standards". The list of referenced specifications without any precedence includes:

ACI 117-90
ACI 315-99
ACI SP-66-94
ACI 349-97
ACI 318-99
ASTM A185
ASTM A615
ASTM A706
ASTM A370
CRSI Manual of Standard Practice
ASME NQA- 1

The above referenced specifications are identified as applicable within the body of DCSO1-BKA-DS-SPE-B-09328-3. For detailing and fabrication, ACI 315 and ACI SP-66 are the referenced guidelines (3.2.B. 1) with the CRSI manual the reference for information not covered by ACI 315. ACI 315 is not a code. ACI 315 is a manual for Details and Detailing of Concrete Reinforcement. ACI 315 is not a mandatory code or standard. ACI 349 is identified as reference in DCSO1-BKA-DS-SPE-B-09328-3 section 1.8.A.3, section 1.10.E, section 2.1 .E.3, section 2.4.A. 1, section 3.2.B.5 none of which reference the bend diameter.

Corrective actions to the violation (paraphrased) included continued implementation of the Commercial Grade Dedication Rebar plan initiated on February, 2008, clarification of the inspection responsibilities related to direct shipment of material, and documenting any mutually agreed variations from processes noted in the E&P QA Manual will be defined in the customer purchase documents.

Evaluation of Energy and Process Corporations Response to Nonconformance 99900866-01-01

The NRC does not accept the Energy and Process response.

The explanations regarding agreements reached with MOX FFF were undocumented discussions and cannot be evaluated for compliance with regulatory requirements.

Our inspection of surveillances by Energy and Process identified that both the initial qualification audit and the completed surveillances were insufficient and did not provide reasonable assurance that the fabrication activities for deformed rebar performed by CMC were completed in conformance with the purchase specifications, which was the basis of the nonconformance. Energy and Process's response does not address any changes to their quality program to address the lack of surveillance and quality assurance controls of fabrication activities.

Energy and Process's response to this nonconformance asserts that the customer's inspection of the rebar upon receipt obviated the contractual agreement with MOX FFF to assure that the rebar was fabricated in accordance with the purchase specification requirements. The purchase order is the controlling document regarding requirements for the fabrication and distribution of parts. Energy and Process's agreement, as stated in the purchase order for rebar, to comply with Part 21 and provide the part in accordance with Appendix B and NQA-1 would require oversight of the fabrication process to ensure quality standards are being met.

The Energy and Process statement that ACI-349 is given no precedence within the body of the specification for the purchase of rebar is misleading. The use of the word precedence in this context was presumably to indicate that ACI-349 was not highlighted or given priority over the other references in the design specification for the purchase of rebar. However, in contrast to this statement, page 3 of the response describes all of the reference specifications listed for the purchase of rebar in the design specification, including ACI-349. The NRC assumes that code requirements listed in this fashion in a purchase specification indicate to the supplier the codes and standards that are applicable to the fabrication and purchase of a component, in this case, deformed (or bent) rebar.

E&P asserted that ACI-315 is not a code or standard. However, our review of ACI-315, entitled "Details and Detailing of Concrete Reinforcement," identified that American Concrete Institute specifically labeled ACI-315 as a standard for "Details and Detailing of Concrete Reinforcement."

The statement regarding a commercial grade dedication plan dated February 2008 was new information for the inspection team. As of April 4, 2008, the inspection team was unable to identify a commercial grade dedication plan for rebar, let alone one that met the guidelines contained in EPRI 5652 and NRC Generic Letters (GL) 89-02, "Actions to Improve the Detection of Counterfeit and Fraudulently Marketed Products" and 91-05, "Licensee Commercial Grade Procurement and Dedication Programs." During the inspection period, the staff was not provided a copy of dedication plan for review. A copy of the dedication plan for rebar, including all revisions should be provided as part of the response.

Nonconformance 99900866/08-01-02

10 CFR 50, Appendix B, Criterion XVIII, "Audits," requires in part, that "audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program."

Contrary to the above, for the period January 2007 through February 2008, audits conducted by Energy and Process were inadequate for determining the effectiveness of the quality assurance (QA) program being audited. Specifically, the audits did not contain the audit scope, objective evidence and review and summation documentation required to determine audit program effectiveness.

Energy and Process Response to Nonconformance 99900866/08-01-02

The reason for the non conformance is the utilization of brevity and paraphrasing of information gathered by qualified auditors.

E&P's audit checklist is built around the 18-point criteria of 10 CFR 50, Appendix B and in accordance with ASME section III, Division 1, sub article NCA-3800. E&P form 101 is the tool utilized for defining the audit scope ("evaluation per"). Objective evidence is evaluated and noted by E&P's auditor and the checklist populated to note results of the evidence reviewed. In the case of limited scope audits, the areas determined by pre-audit information and review to be not applicable are so noted on the checklist. Review and summation is performed at the sign off stage by the QA Manager or his designee and issuance by letter of notification to the vendor audited. E&P feels it has implemented an adequate internal and third party audit process. We do however, recognize the brevity and paraphrasing utilized in the assimilation of information gathered by qualified auditors could be improved and expanded upon. In order to resolve this nonconformance and enhance our program to preclude repetition we have undertaken the following actions.

Corrective actions (paraphrased) included more text and reviewed documentation will be incorporated in the audit documentation to identify the objective evidence examined to determine the conformance of the supplier program with the stated scope and requirements.

Form 101 will be revised to include the audit scope and identify the requirements of the audit. Objective evidence is to appear on the audit checklist in sufficient detail to support the conclusions and/or results of the audit. The cover sheet (101) and checklist will be maintained together as the audit report and as part of our quality records. Additional training will be provided prior to implementation.

Evaluation of the Energy and Process Corporation Response to Nonconformance 99900866-01-02

The NRC has evaluated Energy and Process's implementation of internal and third part audit processes and additional corrective actions are needed to be able to close the nonconformance.

Energy and Process states that "E&P's audit checklist is built around the 18-point criteria of 10 CFR 50, Appendix B and in accordance with ASME Section III, Division 1, sub-article NCA-3800." The inspection team found that the checklists used by Energy and Process to perform audits were taken from Part 50 licensees that had performed audits of Energy and Process to verify compliance with their individual quality programs. However, the Energy and Process audit checklists could not meet the broad requirements of 10 CFR 50, Appendix B, because they lacked scope and specificity as to what was being audited, beyond the basic restatement of

the 18 criteria. Without audit scope and specific criteria tailored to the entity being audited, the audits were ineffective in demonstrating the effectiveness of the program being audited. Also, without contracting the required expertise, Energy and Process could not perform any audits that addressed 10 CFR Part 50, Appendix B, Criterion III, "Design Control," as it did not have any design or engineering expertise in house. Finally, Energy and Process's response regarding the audit program did not address how it would meet the broad scope of a 10 CFR Part 50 quality program with respect to root cause assessment and the specific requirements of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action."

The Energy and Process' response states that it will use a cover letter and checklist containing additional text to provide objective evidence of conformance by the supplier to requirements. Your response was not sufficient to ensure that audits verified compliance with all aspects of a quality program and determine the effectiveness of the program consistent with 10 CFR 50, Appendix B, Criterion XVIII, "Audits." For instance, the quality program of the entity being audited should be reviewed and a scope of audit specifically tailored to the quality program requirements generated by audit personnel. Once the scope is determined, then specific acceptance criteria should be developed to determine the effectiveness of the program being audited. Energy and Process's response to this nonconformance needs to address basic audit processes, including how the process for planning audits will develop scopes and establish audit criteria to assess the effectiveness of the programs being audited.

Nonconformance 99900866/08-01-03

10 CFR 50, Appendix B, Criterion III, "Design Control," requires, in part, that "measures shall be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems and components."

Contrary to the above, for the period January 2007 through February 2008, the commercial grade dedication processes for the procurement of piping material procured from Outokumpu, for plate steel procured from Claymont Steel, and for reinforcing steel procured from Commercial Metals Company Rebar Carolinas were inadequate in that these materials were supplied to MFFF for use in items relied on for safety structures, systems and components without adequate review for suitability of application.

Energy and Process Response to Nonconformance 99900866/08-01-03

The nonconformance related to design control is predicated on the premise that E&P has the responsibility for design control. E&P does not provide the design or specify the material specification required to meet the project design criteria. As such we accept the customer supplied material and project specification as the basis for supply. E&P identifies in QCP 11 paragraph 11.4.4 that the material specifications requirements will define the critical characteristics of the material supplied unless the characteristics are further developed through the mutual agreement of E&P and the customer. QCP 11 serves as E&P's proactive declaration of the attributes E&P will consider critical unless otherwise driven by customer input. At no time did E&P accept responsibility for the design of piping, plate or reinforcing steel. The specifications received were the foundation for E&P's dedication. The audit of E&P's program by MFFF identifies that E&P does not provide for design.

E&P performs testing and verification activities in accordance with the material specification per QCP 11 paragraph 11.4.4. Any revision to the critical characteristics would be approved by the design owner through the procurement channel if the submitted (material specifications) were found to be inadequate or excessive by the customer. Further, E&P submitted documentation relative to the procedure associated with the supply of rebar and piping. All submittals were accepted. The testing associated with the plate provided to SMCI was performed by a third party (Stork MMA). The third party is an E&P approved provider. All chemical and mechanical requirements were verified. SMCI and E&P agreed for SMCI to verify certain attributes (dimensions and marking). This is noted in the customer file and dated September 12, 2006.

Form 105 provides further notification of the critical characteristics verified by E&P. The characteristics associated with material are determined by the material specification. The attributes of the piping identified on form 105 are gathered from the material specifications, not the related CMTR. The CMTR would only be referenced in the documentation section of form 105 after review and approval.

Relative to the exclusion of Form 105 for rebar supplied from CMC Rebar Carolinas, Form 109 was the mutually agreed by E&P and MFFF to document surveillance activity. The inspection of finished parts was to take place at delivery at the MFFF site or at CMC Rebar Carolinas by MFFF associates. This requirement was accepted by MFFF through acceptance of E&P's quality program and QCPs formally submitted and approved by MFFF. This includes the use of Form 109. Form 105 was specifically excluded as the final receipt inspection was to be performed by MFFF for the directly shipped items. The majority of the weaknesses identified by Shaw Areva MFFF were related to the unfounded belief that E&P had design capabilities and further that ACI 315 is a code.

Corrective actions (paraphrased) involved a revision of QCP 11 to incorporate dedication of two product categories. First will be when the customer specifies a simple metallic commodity where requirements are contained in a code or standard specified in (the) customers contract. For this category, all attributes required by the material specifications will be verified using test, inspection, or surveillance and results report to the customer. The second category will include those materials or components that have unique design characteristics not contained in referenced voluntary consensus standards. In this case, it will be the customer's responsibility to identify the critical characteristics and the frequency of testing shall be identified by the customer and in writing to E&P. Based on documentation provided by the customer, all verification activities will be performed by E&P or their approved subcontractor and results reported.

Evaluation of the Energy and Process Corporation Response to Nonconformance 99900866-01-03

Energy and Process stated that "the nonconformance related to design control is predicated on the premise that E&P has the responsibility for design." The nonconformance was not intended to imply that Energy and Process is responsible for design. Rather, the nonconformance reiterated that an adequate commercial grade dedication program determines, for each item procured, the critical characteristics that must be verified prior to issuance for safety-related application. The determination of critical characteristics requires knowledge of the items safety

function and design. When Energy and Process agreed to dedicate components as part of the purchase agreements with MOX FFF, Energy and Process implicitly agreed to perform actions necessary to identify and verify critical characteristics required for the item to perform its intended safety function. The NRC team questioned Energy and Process regarding determination of critical characteristics for parts commercially dedicated for the MOX FFF. No documentation for the determination of critical characteristics was provided and the consistent response from Energy and Process was that the critical characteristics were somewhere in the list of design specifications contained in the purchase order for specific parts. This response is not in conformance with Energy and Process's quality systems manual. QCP 11.4.7 required that a commercial grade dedication specification identify critical characteristics of the item to be validated, and that Form #105 become the commercial grade dedication specification.

The Energy and Process response does not adequately address the three specific commercial grade procurements discussed in the nonconformance. The corrective actions provide no information regarding the determination of critical characteristics for the three examples listed in the nonconformance and in the inspection report. This response should also provide the Energy and Process methodology for the verification of critical characteristics by one of the four methods contained in Electric Power Research Institute's (EPRI) NP-5652.

Nonconformance 99900866/08-01-04

10 CFR 50, Appendix B, Criterion XVI, "Corrective Action" requires, in part, that "in the case of significant conditions adverse to quality, measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition."

Energy and Process Quality System Manual, Section XIV, Rev. 2, "Corrective Action," Item 14.3 states, "Identification of repetitive or significant conditions adverse to quality shall result in issuance of a CAR, Form #107 (Exhibit T), to the responsible vendor or internal department head, as applicable." Energy and Process Quality System Manual, Section IX, Rev. 2, "Nonconforming Material Control," Item 9.2.2 states, "Nonconformances shall be evaluated for reportability under 10 CFR Part 21."

Contrary to the above, from approximately 2007 to the date of this inspection, Energy and Process did not assure that the cause of a significant condition adverse to quality was determined in that they did not generate a Form #107 (Exhibit T) Corrective Action Request to address the failure to meet the ACI-349, "Code Requirements for Nuclear Safety-Related Concrete Structures," limits on reinforcing steel minimum bend diameter for approximately 892 tons of nonconforming reinforcing steel bars, a significant condition adverse to quality. As a consequence, Energy and Process failed to perform a root cause analysis to determine the cause of the condition, and failed to perform an extent of condition review and a 10 CFR Part 21 reportability analysis.

Energy and Process Response to Nonconformance 99900866/08-01-04

The Energy and Process response states that the reason for the nonconformance was that ACI-349 was not considered a controlling document for fabrication tolerances. Based on Section 3.2 of DCS01-BKA-DS-SPE-B-09328-3, Energy and Process considers ACI-315 to be the

controlling document for the dimensions. This standard is a recommended standard and not a mandatory requirement. ACI-349 is included in section 1.8.A.3, section 1.10.E, section 2/1/E/3, section 2.4.A.1, and section 3.2.B.5. in the customers specification primarily for mechanical splices.

We (E&P) had identified both ACI-349 and ACI-315 during our initial contract review. However, since ACI 315 was the referenced standard for detailing and fabrication in the body of DCS01-BKA-DS-SPE-B-09328-3 and ACI-349 applied to other areas, we proceeded with detailing and fabrication in accordance with ACI-315. When Energy and Process became aware of the condition and investigation was initiated immediately. We now recognize that a CAR should have been written at this point.

Corrective actions (paraphrased) were generation of Corrective Action Request 05-08 to document the condition and E&P will take a more proactive approach to documenting Corrective Action Reports. Also, all E&P personnel will be retrained in the corrective action process.

Evaluation of the Energy and Process Corporation Response to Nonconformance 99900866-01-04

The NRC finds that the response does not address the stated nonconformance. A quality assurance program is specifically implemented to promptly identify both conditions adverse to quality as well as significant conditions adverse to quality. While Energy and Process has now written a nonconformance report for the nonconforming steel, the response does not provide a copy of the nonconformance report and any changes made to the quality program. The response does provide a statement to the effect that Energy and Process will now take a more proactive approach to documenting nonconforming Corrective Action Reports. However, the response does not provide any specifics regarding how Energy and Process will ensure that a more proactive approach is taken, other than to retrain all Energy and Process personnel on the corrective action process nor does it submit recommendations to prevent recurrence. The response doesn't indicate which corrective action process will be retrained, or the content of the training. The response does not address root cause assessments and 10 CFR Part 21 evaluations. The response must address these issues in order for the NRC to close this nonconformance.

This response also discusses the application of ACI-315 versus ACI-349. These design standards and codes were listed in the design specification to describe the design requirements associated with the purchase of rebar for installation into items relied on for safety applications. Discussion regarding application of the codes and standards should be finalized and documented during pre-award discussions, not after the fact.

Nonconformance 99900866/08-01-05

10 CFR 50, Appendix B, Criterion XV, "Nonconforming Material, Parts, or Components" requires, in part, that "measures shall be established to control materials, parts, and components which do not conform to requirements in order to prevent their inadvertent use or installation."

The Energy and Process Quality System Manual, Section IX, Rev. 2, "Nonconforming Material Control," requires that the QA Manager disposition nonconforming items by: returning material to vendor; downgrading the material classification; requesting the customer to accept the item disposition with a deviation request; scrap; or rework.

ASME B31.3 Section 340 states, in part, that it is the owner's responsibility to inspect the piping to the extent necessary to be satisfied that it conforms to all applicable exam requirements of the code and of the engineering design. It further states that the owner shall have the right to inspect the piping to satisfy the owner's responsibilities. Section 341 states, in part, that inspection does not relieve the manufacturer or fabricator of the responsibility for providing components in accordance with the requirements of the Code. This Section further requires that an examined item with one or more imperfections of a type or magnitude exceeding the acceptance criteria of the Code shall be repaired or replaced.

Contrary to the above, Energy and Process, with assistance from Piping Systems, Inc., did not properly control nonconforming material and prevent its use in that they incorrectly dispositioned nonconforming material associated with Nonconformance Report 09-08 dated January 15, 2008. Specifically, on December 20, 2007, MFFF Services issued Nonconformance Report CE-07-0154, to document receipt of a piping spool piece (F0231) from an Energy and Process subcontractor, Piping Systems, Inc. containing a weld defect that did not meet the acceptance criteria of ASME B31.3, 1996 Edition, 1998 Addenda, paragraph 341.3.2 and Table 341.3.2, which limit incomplete penetration to not more than 1.5 inches in any 6 inch weld length. Energy and Process did not repair or replace the defect nor request MFFF Services to accept the item disposition with a deviation request, but dispositioned the weld defect as use-as-is by inappropriately applying allowances in ASME B31.3 Section 341.3 for acceptance, by leak testing, of joints not subject to examination. The Nonconformance was issued for the failure to adequately disposition an ASME B.31.3 code deficiency for a piping spool piece.

Energy and Process Response to Nonconformance 99900866/08-01-05

The reason for the nonconformance is misunderstanding by E&P personnel. On December 20, 2007, the customer issued NCR CE-07-0154 for Spool F0321 as having incomplete penetration greater than 1.5" in any 6", stating weld length does not meet acceptance criteria B31.3 P341.32 and Table 341.32 1998 Edition 98 Addenda. On December 21, 2007, E&P notified Piping Systems of the reported nonconformance. Piping Systems' response to the nonconformance was that the spool in question was acceptable to ASME B31.3 P341.3.1 based on hydro testing performed in accordance with their procedure QA-N- 11 SR for welds that are not accessible for examination.

Based on the examinations performed by Piping Systems to P341.3.1 the welds were acceptable. On the basis of the information provided by Piping Systems and the requirement of ASME B31.3 Section 340 the welds had been examined and found to be acceptable. As a result the NCR 09-08 was closed based upon the Hydro test results.

When the material was hydro tested at Piping Systems an extension was on the pipe making the subject weld approx 36" from the end exceeding the 24" visual examination requirement per ASME Sect V. Consequently the weld was accepted based on the hydro tests performed at Piping Systems. On January 15, 2008, E&P documented the condition and dispositioned the

item as "accept" based on a justification provided in an email from Piping Systems on January 9, 2008. Corrective actions (paraphrased) include concurrence by E&P that an NCR should not have been closed prior to concurrence from the customer. It was E&P's understanding that we were closing an NCR on our supplier and not the Shaw Areva nonconformance. E&P management will document a policy that customer generated NCRs cannot be dispositioned as "accept as-is" without concurrence from the customer. Training will be conducted throughout E&P to enforce this position.

Evaluation of the Energy and Process Corporation Response to Nonconformance 99900866-01-05

Energy and Process indicated that a misunderstanding was the reason for the failure to properly disposition this code deficiency. The misunderstanding was caused by communication with the piping spool piece vendor, Piping System, about how to disposition the code deficiency instead of direct communication with MOX FFF. In responding to the input from Piping Systems, Energy and Process misapplied the ASME code. The stated corrective action was additional training to ensure that customer generated nonconformance reports are not closed as "accept as is" without customer concurrence.

The corrective action doesn't adequately address communications with customers regarding nonconformance reports. All customer generated nonconformance reports, as well as any nonconformances generated either by Energy and Process or by any part supplier with quality programs should be sent to and discussed with the customer, as a part of the purchase specification agreement. MOX FFF needs to be cognizant of and agree with the proposed disposition of the nonconformance, so that a determination can be made as to whether or not the disposition was consistent with design and purchase order specification requirements. The corrective actions should address the formal communication of all nonconforming conditions with the customer and a copy of the policy.